






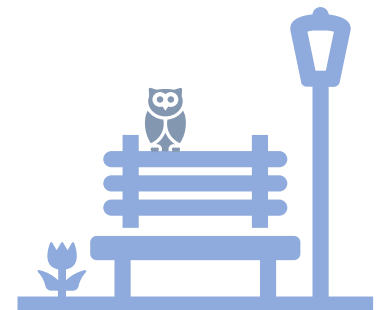
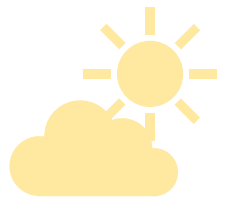
NETWORK MEDIA

INFORMATION SHEET 2.1-1

LEARNING OBJECTIVES

After reading this **INFORMATION SHEET**, STUDENT(S) MUST be able to:

-  Describe the primary types and uses of twisted-pair cables
-  Describe the primary types and uses of coaxial cables
-  Describe the primary types and uses of fiber-optic cables
-  Describe the primary types and uses of wireless media
-  Compare and contrast the primary types and uses of different media



NETWORK MEDIA

Network media is the actual path over which an electrical signal travels as it moves from one component to another. This information sheet describes the common types of network media, including twisted-pair cable, coaxial cable, fiber-optic cable, and wireless.



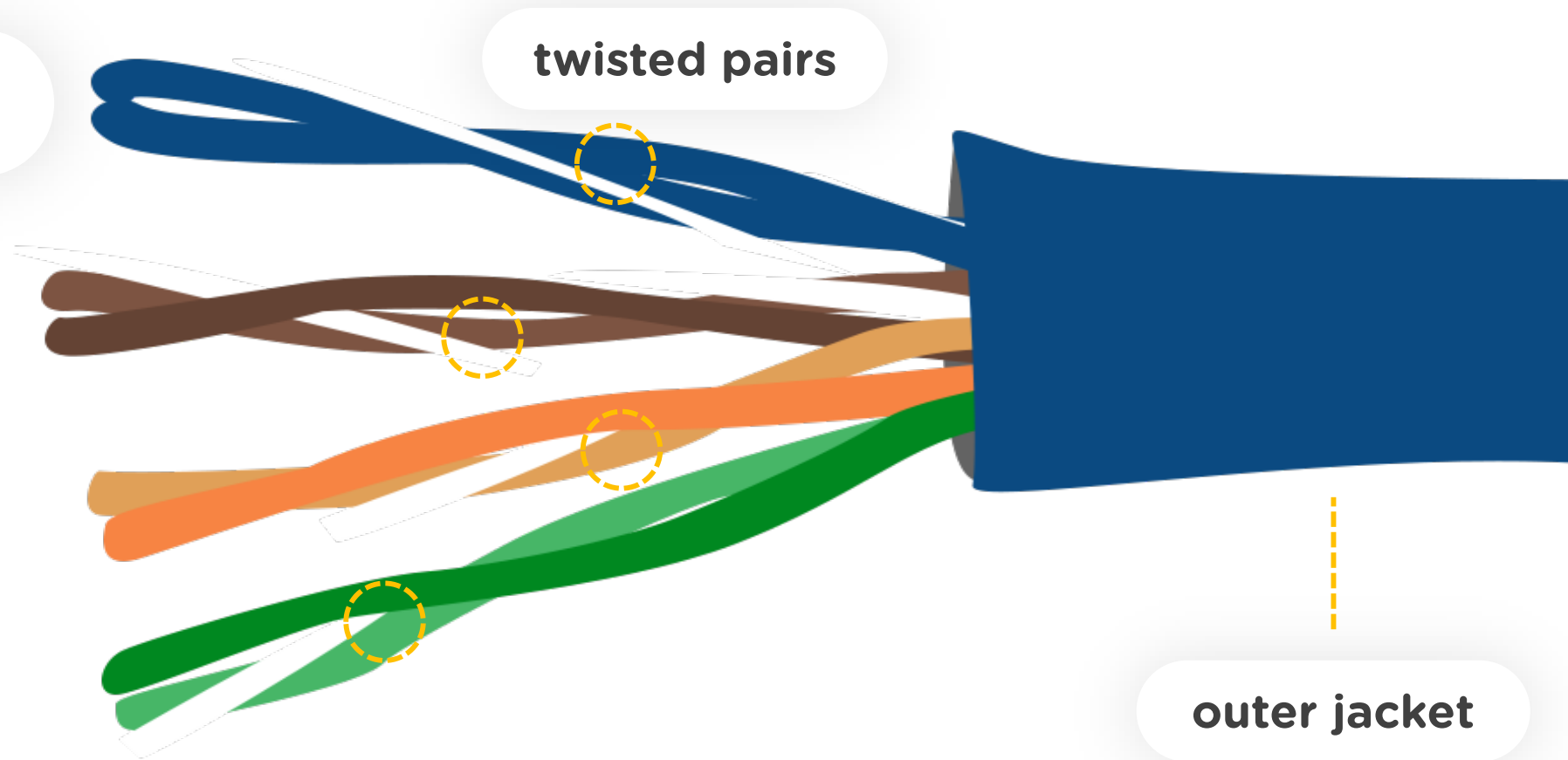
TWISTED PAIR

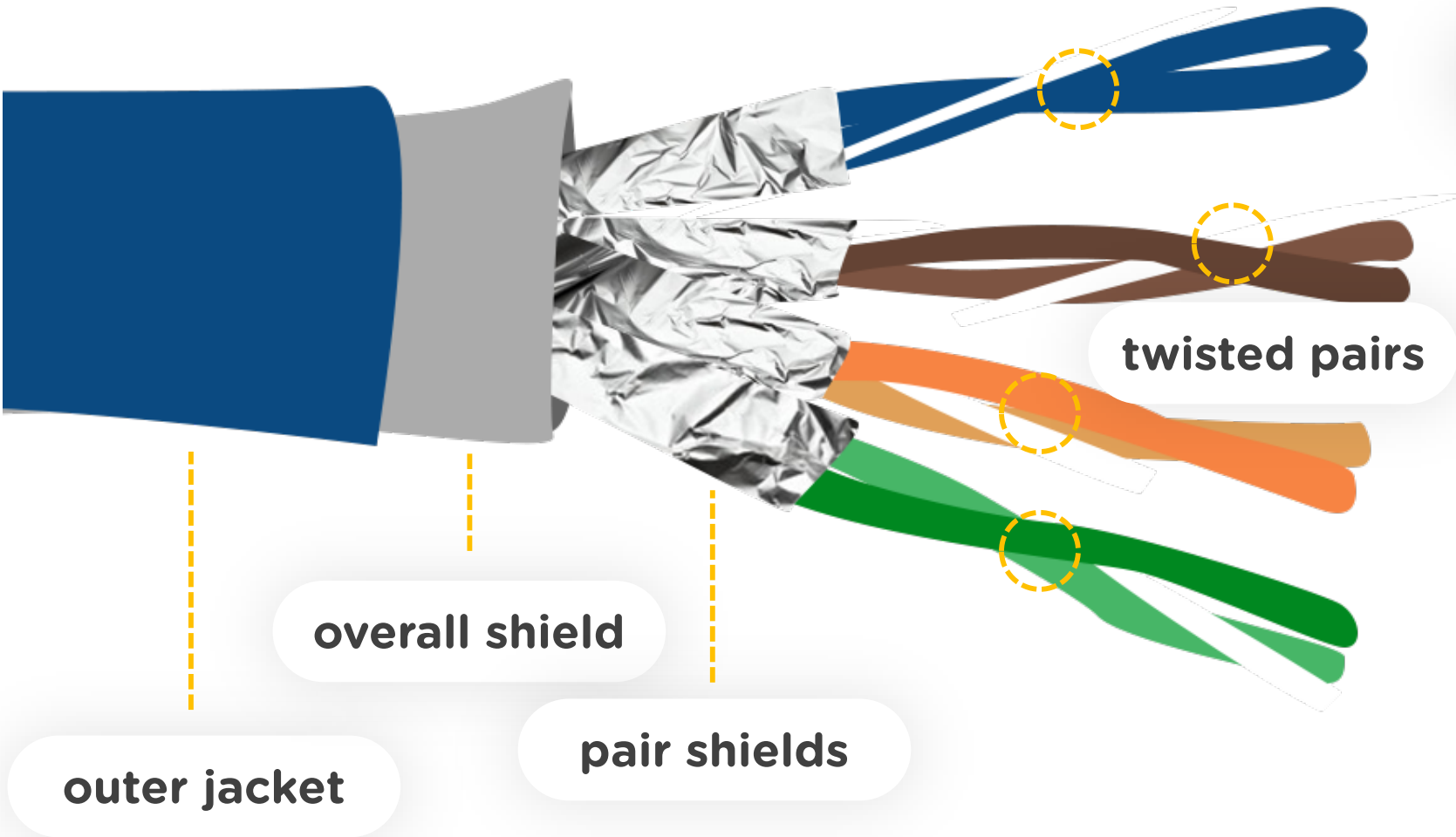
Twisted-pair cable is a type of cabling that is used for telephone communications and most modern Ethernet networks.



UNSHIELDED TWISTED PAIR (UTP)

UTP cable is a medium that is composed of pairs of wires. UTP cable is used in a variety of networks. Each of the eight individual copper wires in UTP cable is covered by an insulating material.



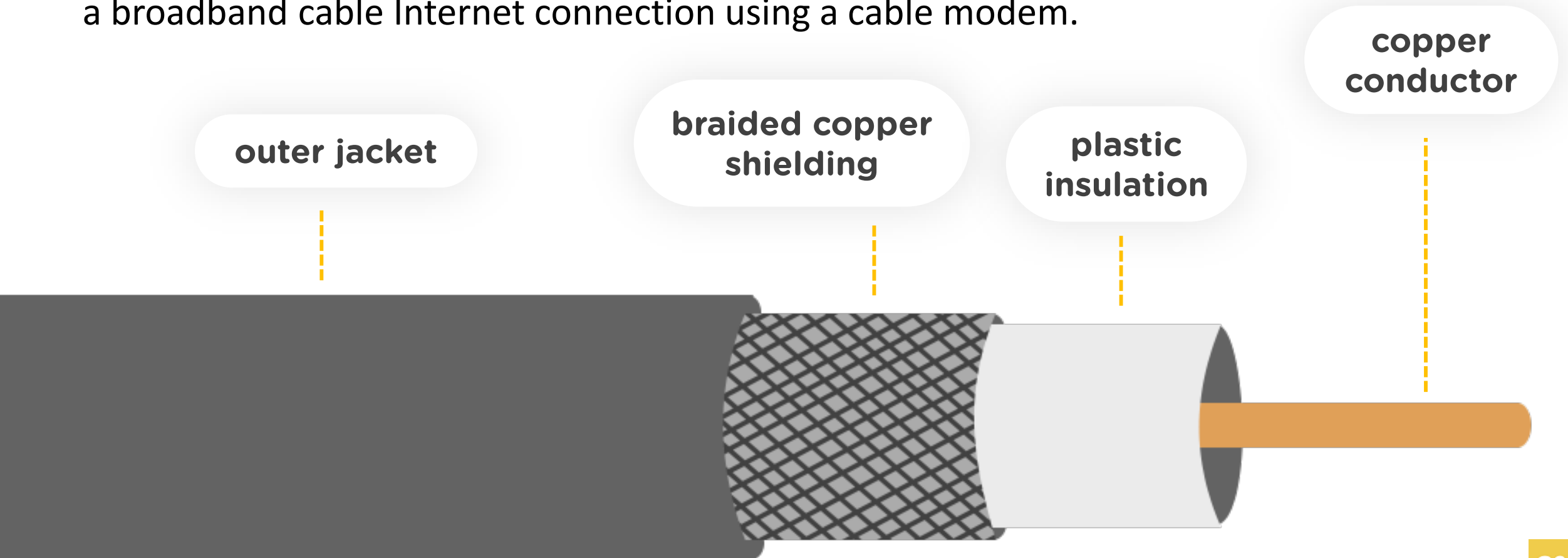


SHIELDED TWISTED PAIR

It is a cable combines the techniques of shielding, cancellation, and wire twisting. Each pair of wires is wrapped in a metallic foil. The four pairs of wires then are wrapped in an overall metallic braid or foil.

COAXIAL CABLE

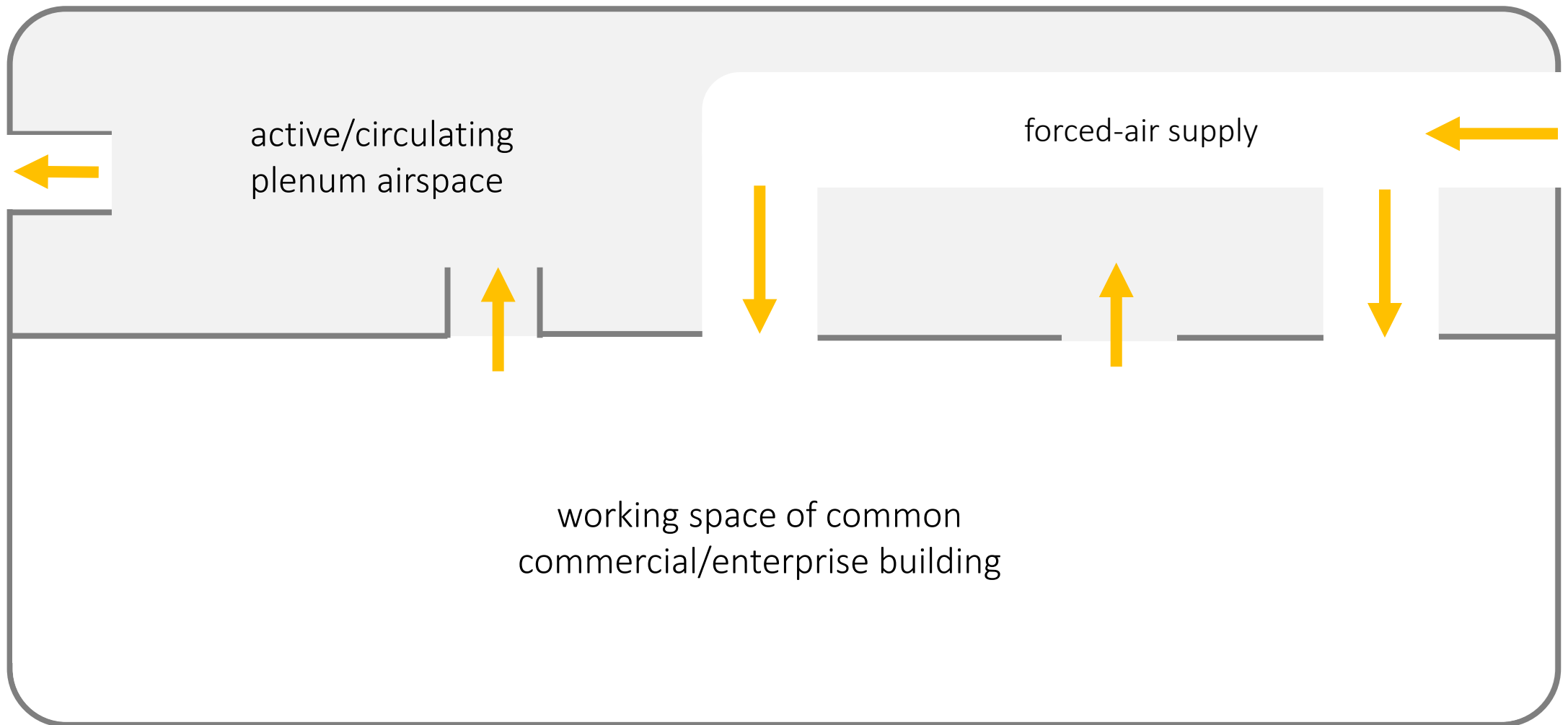
It is a cable used in the transmission of video, communications, and audio. However, these cables are also used in networks and what allow a broadband cable Internet connection using a cable modem.



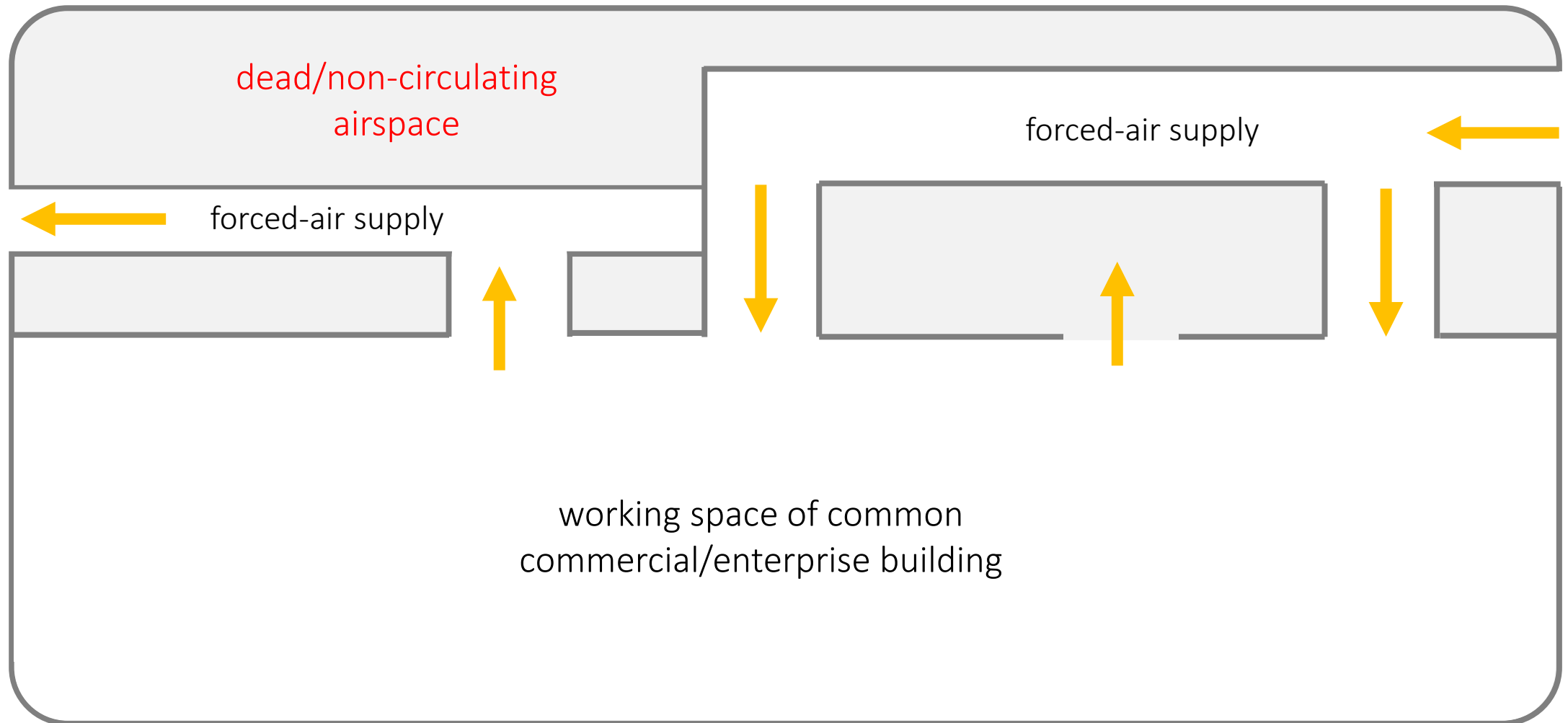
PLENUM CABLE

is the cable that runs in plenum spaces of a building. In building construction, a plenum is a separate space provided for air circulation for heating, ventilation, and air-conditioning (sometimes referred to as HVAC), typically in the space between the structural ceiling and a drop-down ceiling.

PLENUM AIRSPACE

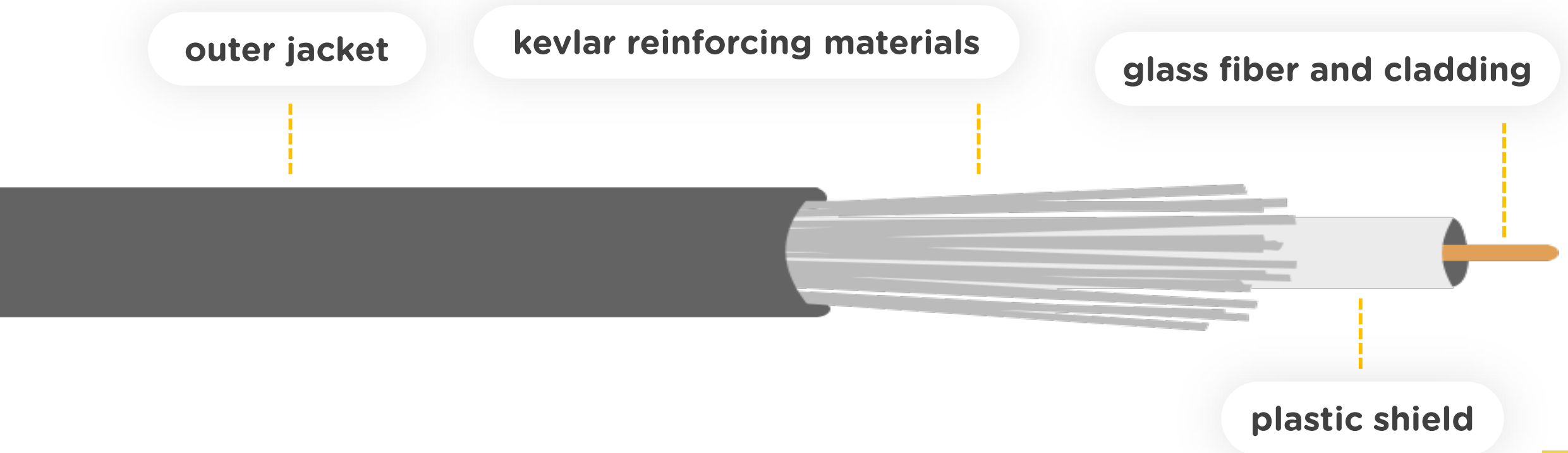


NON-CIRCULATING AIR SPACE



FIBER OPTIC CABLE

is cable that contains optical fibers (usually glass) coated in plastic that are used to send data by pulses of light.



types of fiber-optic cable

Single-mode fiber cable

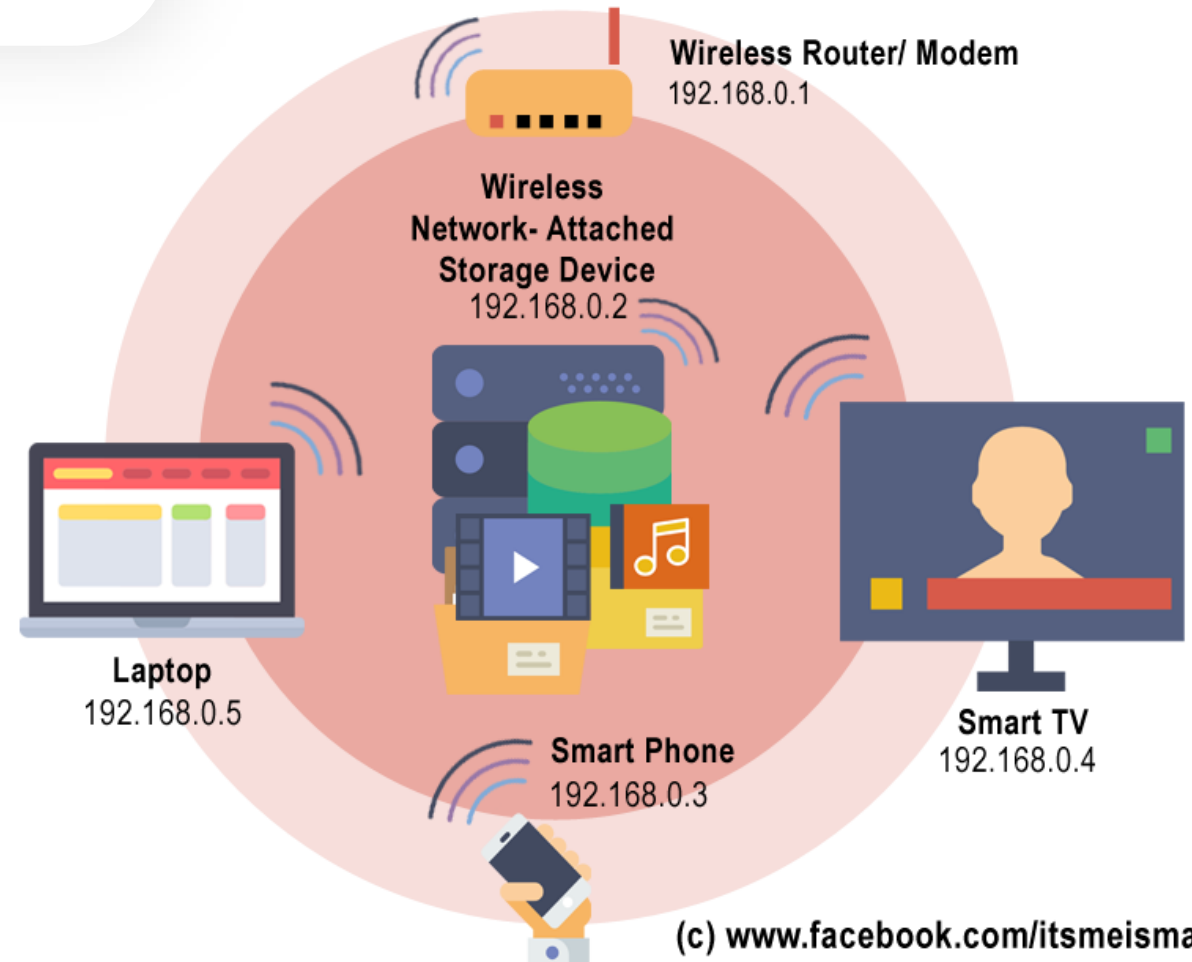
allows only one mode (or wavelength) of light to propagate through the fiber.

It is capable of higher bandwidth and greater distances than multimode, and it is often used for campus backbones.

Multimode fiber cable allows multiple modes of light to propagate through the fiber. It is often used for workgroup applications and intrabuilding applications such as risers. It uses light-emitting diodes (LEDs) as a light-generating device. The maximum cable length is 2 km (6561.7 feet).

wireless communication

Wireless communication uses radio frequencies (RF) or infrared (IR) waves to transmit data between devices on a LAN. For wireless LANs, a key component is the wireless hub, or access point, used for signal distribution.



thank you!

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